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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/753,874

01/09/2004

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EXAMINER

NGUYEN, PHONG H

ART UNIT

PAPER NUMBER

3724

MAIL DATE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/753,874	<b>Applicant(s)</b> HALAMODA ET AL.	
	<b>Examiner</b> PHONG H. NGUYEN	<b>Art Unit</b> 3724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-7,9-12 and 14-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-7,9-12 and 14-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

#### ***Claim Rejections - 35 USC § 103***

2. Claims 9-12 and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dietz (EP 64263A2) in view of Takashima et al. (US Pub. 2004/0113979), hereinafter Takashima.

Regarding claims 9, 10 and 17, Dietz teaches a punching device for making tapered holes capable of being use to punch holes on a ceramic substrate comprising: a receiving device 7, a die having a shaft 2, an operative portion having a first part 6 and a second cylindrical part 14, a stripper opening 12, a drive mechanism and a die guide 8. See Figs. 2-4.

Dietz teaches the second part 14 functioning as a guide but not as a punch.

Takashima teaches an operative 5 for making a tapered hole having a first part 5c and a second punching part 5b. See Figs. 1-3.

Therefore, it would have been obvious to one skilled in the art to incorporate the second punching part as taught by Takaskima into the second part of Dietz to speed up the process of making a tapered hole since the tapered portion and the constant diameter portion are made in one step but not two steps as taught by Diet.

Regarding claim 11, the upper portion of the punching portion is unguided in the transverse direction in a ready state as shown in Fig. 1-3.

Regarding claim 12, the die guide device 8 having a bush (upper portion of element 5) with a passage 27 is best seen in Figs.1-3.

Regarding claim 16, it appears that the length of the operative portion is greater than the stroke of the drive mechanism. See Fig. 1.

Regarding claims 18-20, Dietz teaches a tool for punching a sheet like substrate comprising:

- a lower tool part 7 having a flat receiving face for a substrate;

- an upper tool part;

- a die having a shaft 2, a graduated operative portion including a first part 6 and a second cylindrical part 14, a linear guide 8, a stripper bush 5 having a constant diameter stripper opening 12; and

- a drive mechanism 10. See Figs. 1-3.

Dietz teaches the second part 14 functioning as a guide but not as a punch.

Takashima teaches an operative 5 for making a tapered hole having a first part 5c and a second punching part 5b. See Figs. 1-3.

Therefore, it would have been obvious to one skilled in the art to incorporate the second punching part as taught by Takaskima into the second part of Dietz to speed up the process of making a tapered hole since the tapered portion and the constant diameter portion are made in one step but not two steps as taught by Diet.

3. Claims 1-3 and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dietz (EP 64263A2) in view of Saito (5,848,563) and Takashima et al. (US Pub. 2004/0113979), hereinafter Takashima.

Regarding claim 1, Dietz teaches a punching device capable of punching holes on a ceramic substrate comprising:

a receiving device 7, which has a substantially flat receiving face for a ceramic substrate 11, and in which a punched hole is embodied;

at least one die, which disposed above a punched hole and has a shaft 2 and an operative portion (6 and 14) that extends through a stripper opening 12, which is disposed in a stripper above the associated respective punched hole and extends to an outer face of the stripper facing the receiving face, and with the operative portion having a first part 6 with a diameter that is less than the diameter of the shaft by a multiple of the diameter of the first part and greater than the diameter of an associated punched hole, and the first part of the operative portion, at its lower end, has a punching cylindrical portion 14 whose diameter is somewhat less than the diameter of the punched hole and whose length is less than the length of the stripper opening;

a drive mechanism, which is connected in driving fashion to the die in order to move linearly by a defined stroke and in the process to move the punching portion into the punched hole and out of it; and

a die guide device 8, through which the shaft extends and which guides the die at its shaft. See Figs. 1-4.

Dietz is silent whether the receiving device having a plurality of punched holes. Saito teaches a receiving device having a plurality of punched holes for accommodating different punch sizes. See Figs. 2 and 3.

Therefore, it would have been obvious to one skilled in the art to provide a plurality of punched holes as taught by Saito in the receiving device of Dietz for accommodating different punch sizes.

Dietz teaches the second part 14 functioning as a guide but not as a punch.

Takashima teaches an operative 5 for making a tapered hole having a first part 5c and a second punching part 5b. See Figs. 1-3.

Therefore, it would have been obvious to one skilled in the art to incorporate the second punching part as taught by Takashima into the second part of Dietz to speed up the process of making a tapered hole since the tapered portion and the constant diameter portion are made in one step but not two steps as taught by Diet.

Regarding claim 2, the upper portion of the punching portion is unguided in the transverse direction in a ready state as shown in Fig. 1-3.

Regarding claim 3, the die guide device 8 having a bush (upper portion of element 5) with a passage 27 is best seen in Figs. 1-3.

Regarding claims 5, 14 and 15, the modified punching assembly of Dietz teaches the invention substantially as claimed except for the length of the punching is equal to the length of the stroke of the drive. At the time the invention was made, choosing the length

of the punching stroke is well known in the art since the length of the punching stroke depends on the length of the punching portion, the thickness of the workpiece and the distance between the tip of the punching portion and the workpiece. Therefore, it would have been obvious to one skilled in the art to select a stroke length equal to the length of the punching portion since such practice is well known in the art.

Regarding claim 6, the stroke length is the distance between the extreme down end of the punching 14 and the bottom surface of workpiece 11. The operative portion length is sum of the lengths of the first part 6 and the second punching part 14. It appears that the length of the operative portion is greater than the stroke length of the drive mechanism. See Fig. 1.

Regarding claim 7, the punched hole and a slug conduit having a greater diameter than the punched hole are best seen in Figs. 1-3.

Regarding claim 8, the diameter of the shaft 2 is a multiple of the diameter of the first part 14 of the operative portion. See Fig. 1.

### ***Response to Arguments***

4. Applicant's arguments filed 01/28/2008 have been fully considered but they are not persuasive.

The Applicant argues that the combination of Dietz and Takashima teaches making a production of a hole with a cylindrical portion and a tapered portion but not a cylindrical hole only according to the claimed invention. This argument is not persuasive.

No where in the claim language excludes the tapered portion in the hole. Therefore, the combination of Dietz and Takashima reads on the claimed invention.

The Applicant argues that Dietz does teach the portion 14 functioning as a removing material portion. This argument is not persuasive. Dietz's teaching alone does not teach the portion 14 functioning as a removing material portion. However, the combination of Dietz and Takashima does. Takashima teaches that it is possible to remove material from of a workpiece and make a tapered portion on the workpiece simultaneously. Therefore, it would have been obvious to one skilled in the art to modify the portion 14 of Dietz by providing a sharp end so that it can remove material from a workpiece and make a tapered hole simultaneously.

The Applicant argues that Dietz does not teach a flat receiving surface. This argument is not persuasive. The flat receiving surface is best seen in Fig. 1 in Dietz. Furthermore, it is to be noted that the term "substantially flat receiving face" is a relative term. A slightly curve or inclined face as shown in the figures in Dietz would read on the term "substantially flat receiving face".

The Applicant argues that the combination of Dietz, Takashima and Saito would not read on the claimed invention because of the deficiencies in Dietz and Takashima. There is no deficiency in the combination of Dietz and Takashima. Therefore, the combination of Dietz, Takashima and Saito reads on the claimed invention.



***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHONG H. NGUYEN whose telephone number is (571)272-4510. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley can be reached on 571-272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you

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have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Timothy V Eley/  
Primary Examiner, Art Unit 3724

/P. H. N./  
Examiner, Art Unit 3724  
April 26, 2008